UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,889	03/31/2004	Raj Prakash	188518/US	5753

66083   7590   12/31/2007
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EXAMINER
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ART UNIT	PAPER NUMBER
2193	

MAIL DATE	DELIVERY MODE
12/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

AK

		Application No.	Applicant(s)
Office Action Summary		10/813,889	PRAKASH ET AL.
		Examiner	**Art Unit**	
		John Chavis	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-60</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10,12-38,40-50 and 52-60</u> is/are rejected.

7)☒ Claim(s) <u>11,39 and 51</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 March 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/9/05</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Claim Rejections - 35 USC § 112

1.   Claims 6, 22-24, and 37 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The applicant claims, in claim 6, that the portability code allots sufficient space for the representations and that function is considered critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. In this case, the feature is considered not enabled by the disclosure; since, the disclosure specifies in sect. 1023 that the compiler (not the portability code) allots sufficient space. Claim 22 is rejected for the same reason as claim 6. The features of claims 23-24 do not cure the issues associated with claim 22 and are therefore rejected for the same reasons. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   The claimed inventions of claims 1-15, 26, 35-48, 49-56 and 57-60 are directed to non-statutory subject matter. For example, in claim 1, the applicant claims a software tool, which is considered software per se. Claims 1 - 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful,

concrete and tangible result. No physical transformation is recited and additionally, the final

result of the claim is software code, which is not a tangible result because the claim does not

consist of a computer storage medium (product) comprising the code. Therefore, the claims

are directed toward non statutory material. The dependent claims of claim 1 do not cure

the problems associated with their respective parent claim.

Claims 26, 35-48 and 57-60 claim a media, which is not fully described in the

specifications. However, the applicant describes a medium, in reference to claims 57-

60. Therefore, the feature for both sets of claims is considered to be represented via the

applicant's definition of the term medium. However, the applicant describes the term as

a mechanism for transmitting information or carrier waves via sect. 1037. That is, The

claims are directed to a signal directly or indirectly by claiming a medium and the Specification

recites evidence where the computer readable medium is defined as a *"wave"* (such as a carrier

wave) . In that event, the claims are directed to a form of energy which at present the office feels

does not fall into a category of invention. Therefore, claims 35-48 and 57-60 are non-statutory.

In claims 49-56, the applicant claims an apparatus; however, nothing in the claims appear

to refer to an apparatus. For example, the means for transmitting and the means for including are

both considered merely software; Since, hardware components such as a memory, processor, etc,

does not appear to exist in the claim. Therefore, the claims are non-statutory for the same reasons

specified above for claims 1-15.

4.   Claims 26 and 34 should be written in an independent format; since, it is different from

the method claim 16. Dependent claim should further modify the claim from which they depend;

while, claim 26 is considered to implement a different type of claim.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-10, 12-38, 40-50, and 52-60 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Aberg et al. (2006/0158354).

Claims	Aberg
1. A software tool comprising:	See the encoding device of claim 17.
portability code to include an intermediate representation of source code with an executable representation of the source code,	See sects. 0046-0049, in which the compressed code is portable for different environments. However, Aberg does not teach or suggest the feature of including an intermediate representation with an executable representation of the source code. But, nothing in the claim specifies that both of them are used or that either is used. Furthermore, it appears that only One will be used at a time; similar To the features taught by Aberg In which optimizations are Performed prior to transfer (in a Pre-transfer phase to eliminate Compilation time at the terminal

(via an executable representation)
Or post transfer (via an intermediate
representation) to increase the
Efficiency of the generated code,
See sects 0098-0099. It appears,
that even in the applicant's
system the intermediate version
will be used when a source and
target systems are different to
enable compatibility or
to enable optimization at the
target system and that the
Executable version is designed for
Systems that are similar.
Therefore, it would have been
obvious to a person having
ordinary skill in the art at the time
of the invention to provide both
representations when and if both
are to be utilized on the same
system. Again nothing in the
claims indicate that this is the
case, see sect. 1006 of the
applicant's specifications.

wherein the intermediate
representation of the source code
includes information sufficient for
generating another executable
representation of the source code.

See the discussion above.

2. The software tool of claim 1,
further comprising the portability
code to include source code
processing information with the
intermediate source code
representation and the executable
source code representation.

Aberg does not specify that
source code is also transferred
along with intermediate and
executable code; however, he
does indicate that input code
can be in any suitable
Representation. Therefore,
since it appears that again only
one representation is used at a
time in the applicant's
specifications, Alberg's transfer
of any representation and the

pre and post optimization phases are considered to provide for a similar functionality feature of having one of the features available for execution depending on the requirements of the target system. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to provide multiple inputs when or if the target system required more than one. Again, the applicant does not specify that more than one is required or utilized.

3. The software tool of claim 2, wherein the source code processing information includes one or more of compiler directives, compiler options, compiler

See sects. 0058-0060 and the rejection of claim 2.

4. The software tool of claim 1, wherein the executable source code representation at least includes executable code.

See the abstract.

5. The software tool of claim 1, wherein the intermediate representation includes one or more of linking information, symbol tables, object bindings, and platform independent optimization information.

See sect. 0031, in which linking and binding are considered inherent to enable code in one representation to be transformed to code in another representation. The same section also provides for platform independent optimization.

6. The software tool of claim 1, wherein the portability code allots sufficient space for the executable representation and for the intermediate

See the 112 1st Paragraph rejection above. Unsupported features are not entitled patentable weight. Therefore, claim 6 is rejected as claim 1.

representation as a portable
executable source code
representation.

7. The software tool of claim 1,
further comprising platform
independent processing code to
perform platform independent
processing of the source code
and to generate the intermediate
representation of the source code.

See the rejection of claim 1.

8. The software tool of claim 7,
wherein the platform independent
 processing includes one or more
of lexical analysis, syntax
analysis, platform independent
optimization, and semantic
analysis.

Aberg's system consists of
platform independent
optimizations, as indicated in
claim 1.

9. The software tool of claim 1,
wherein the software tool uses
the intermediate source code
representation to generate a
second executable
representation of the source
code.

This is the purpose of
intermediate code, as indicated
in claim 1.

10. The sottware tool of claim 9,
wherein the second executable
source code representation is
for a different one or more of
platform and operating
environment than the executable
source code representation.

See the rejection of claim 9.

12. The software tool of claim 1,
wherein the software tool
includes one or more of a compiler
front-end, a compiler back-end, an
interprocedural optimizer, an
interpreter, and a linker.

See the rejection of claim 1.

13. The software tool of claim 1, further comprising the portability code to include linking information with the executable source code representation and the intermediate source code representation.

"   "   "   "

14. The software tool of claim 13, wherein the linking information includes object file information.

"   "   "   "

15. The software tool of claim 13, further comprising a link-time optimizer to re-link object files corresponding to the source code in accordance with the linking information.

The JIT function in sects. 0010 and 0045 is considered to provide for this feature.

In reference to claims 16-18, see the rejection of claims 1-3, above.

The features of claims 19, 28, 31 52, and 58 are taught via claim 5.

As per claims 20-21, see the rejections of claims 7-8.

In reference to claim 22-24, see the rejection of claim 6.

The features of claim 25 are taught via the rejection of claim 16 in view of sects. 0029-0031.

As per claim 26, see the rejections of claim 16.

In reference to claims 27, 29, 32-35, 42-43, 47-50, 53-55 and 57, see the rejection of claim 1, above.

Aberg does not specify that the second source representation includes a library, As specified in claim 30; however, it would have been obvious to a person having ordinary skill in the art at the time of the invention to provide a library in Aberg's system

to enable a selection of the version based on preferences of stored information, such as the optimized machine independent representation, optimized machine specific representation, optimized partially machine independent representation, etc. based on preference, See sect. 0031.

The features of claim 36 are taught via claim 2.

In reference to claims 37 and 40, see the rejection of claim 6, above.

The features of claims 38 and 44-46 are taught via sect. 0031.

As per claim 41, see the rejection of claim 8.

In reference to claim 56, see the rejection of claim 10.

The features of claim 59 are taught via claim 4 in which Java code (object oriented code) inherently includes code and data, see also sect. 0095.

In reference to claim 60, see the rejection of claim 3.

Allowable Subject Matter

7.   Claims 11, 39 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (571) 272-3720. The examiner can normally be reached on M-F, 9:00am-5:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC

John Chavis
Primary Examiner AU-2193